

**CORRECTING ERRONEOUS LARVAL FOOD PLANT RECORDS:
THE CASE OF *HYPOCHRYSOPS BYZOS* (BOISDUVAL)
(LEPIDOPTERA: LYCAENIDAE)**

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Abstract

The larval food plant for *Hypochrysops byzos* (Boisduval) on Mt Warning, in northern New South Wales, is corrected from *Astrotricha longifolia* (Araliaceae) to *Rulingia salviifolia* (Sterculiaceae). The importance of removing erroneous records from the literature is discussed.

Introduction

Eastwood (1997) recorded *Astrotricha longifolia* Benth. (Araliaceae) as a larval food plant for the lycaenid butterfly *Hypochrysops byzos* (Boisduval) on the upper slopes of Mt Warning National Park in northern New South Wales. Doubts were raised subsequently regarding the authenticity of this record, particularly since *A. longifolia* was not known to occur on Mt Warning. Furthermore, *H. byzos* usually feeds on *Pomaderris* species (Rhamnaceae) and, since *Pomaderris argyrophylla* N.A.Wakef. occurs on the upper slopes of Mt Warning and its leaves resemble those of *Astrotricha* spp., it was thought that this may be the correct larval food plant. As a result of the uncertainty, Braby (2000) did not include *A. longifolia* as a larval food plant for *H. byzos*, suggesting it was likely to be a misidentification. The purpose of this paper is to document the correct larval food plant and comment on the importance of removing erroneous records from the literature.

Observations

The correct larval food plant for *H. byzos* on Mt Warning is *Rulingia salviifolia* (Hook. ex Steetz) Benth. (Sterculiaceae). This plant grows in sandy or skeletal soil and is usually found in the understorey of eucalypt woodland, but appears to thrive in relatively exposed conditions on the summit of Mt Warning. Its distribution is on coastal mountains from Mt Warning in the south to Mt Byron (north-west of Brisbane) in the north (Queensland Herbarium records). The Mt Warning ecotype is typical of the species, except that the indumentum of the upper leaf surface is relatively sparse, resulting in green or grey-green appearance, rather than the usual grey or silvery-grey.

The original (incorrect) identification in 1996 was based on a sprig of fresh leaves; however, this amended record was determined from a flowering pressed specimen, highlighting the importance of reproductive structures for accurate plant identification. This voucher specimen is to be lodged at the Queensland Herbarium. Elsewhere, *H. byzos* has been recorded feeding on another member of Sterculiaceae, viz. *Commersonia fraseri* J. Gay, while the closely related *H. pythias* C. & R. Felder feeds on the congeneric *C. bartramia* (L.) Merr. (Braby 2000).

Discussion

It is important that erroneous records, when discovered, are formally corrected in the literature so that incorrect information is not perpetuated or used to effect misleading conclusions. Accurate larval food plant data are important from an evolutionary perspective when interpreting plesiomorphic or apomorphic character states, host shifts, or phylogeographic patterns. For example, it is likely that *H. pythias* is ancestral to *H. byzos*, since the former has a wider distribution, a greater number of subspecies and a more closely related sister species, *H. gemminatus* Sands (Sands 1986). Examination of larval food plant records in relation to this hypothetical arrangement suggests that the speciation of *H. byzos* may have coincided with a host shift from Sterculiaceae to Rhamnaceae, and that the population of *H. byzos* on Mt Warning may therefore represent a reversion to the ancestral larval food plant. The interpretation of such a character reversion would be incompatible with the record of *A. longifolia*. Accurate records of plant predator fauna also may provide useful phylogeographic data or be important for determining potential biological control agents. Finally, larval food plant records may be used as predictive tools when assessing a species' geographical distribution. Hence, accurate larval host plant information is essential for the development of informed conservation strategies for threatened species.

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References

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